Release Notes

HP StorageWorks Enterprise Virtual Array 3000

Product Version: 3.014

Second (June 2004)

Part Number: T3038-98101

This document contains the most recent product information about the HP StorageWorks Enterprise Virtual Array 3000, as well as supplemental, support, and product feature details.

For the latest version of these Release Notes and other HP StorageWorks Enterprise Virtual Array 3000 documentation, go to the following website: http://www.hp.com/go/eva3000



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Enterprise Virtual Array 3000 Release Notes
Second (June 2004)
Part Number: T3038-98101

Release notes contents

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Note: To ensure that you always have the most up-to-date information about your storage system, check the following web site frequently to download the latest version of the Release Notes:

http://www.hp.com/go/eva3000

Intended audience

This document is intended to assist customers who purchased the HP StorageWorks Enterprise Virtual Array 3000 Release Notes and the following associated software:

- HP StorageWorks Virtual Controller Software v3.0 media kit for dual HSV100 controllers
- HP OpenView Storage Operations Manager EVA v1.0
- HP StorageWorks Business Copy EVA3000 v2.2
- HP StorageWorks Continuous Access EVA3000 v1.1

This document is also intended for use by HP Customer Service personnel responsible for installing and maintaining designated devices associated with this storage system.

Additional Enterprise Virtual Array documentation and downloads

Additional documentation, including white papers, best practices, and switch documents, are available from the HP website at http://www.hp.com.

For more information on the Enterprise Virtual Array 3000, including a link to technical documentation, visit http://www.hp.com/go/eva3000

To access HP OpenView Storage Operations Manager, Command View EVA documentation, visit http://h18006.www1.hp.com/products/sanworks/managementappliance/documentation.html.

For information on HP StorageWorks Business Copy EVA, visit http://h18006.www1.hp.com/products/storage/software/bizcopyeva/index.html.

For information on HP StorageWorks Continuous Access EVA, visit http://h18006.www1.hp.com/products/storage/software/conaccesseva/index.html.

For downloadable software and drivers for storage products, visit http://welcome.hp.com/country/us/eng/support.html.

To order Storage Management Appliance updates, visit http://h18000.www1.hp.com/products/sanworks/managementappliance. You can access the latest update by selecting Software & Drivers.

To access the latest version of Storage Management Appliance technical documentation, visit http://h18006.www1.hp.com/products/sanworks/managementappliance/documentation.html.

To access Enterprise Virtual Array product support, visit http://h18000.www1.hp.com/products/storageworks/enterprise.

To redeem a license key, visit http://h18000.www1.hp.com/products/software/softwarekeys/index.html.

To download operating system platform kits, visit http://www.hp.com/go/evaplatformkit.

New features and enhancements

The Enterprise Virtual Array 3000 v3.014 provides the following new features and enhancements:

- Correction for orphaned PSEG metadata potential when deleting large LUNs
- Non-disruptive orphaned PSEG metadata repair

- Performance improvement with multiple snapclones
- Improved error handling algorithm for intermittent drive errors
- Providing CA-source ride-thru from CA-destination problems
- Correction of false critical error message on startup with Hitachi FC Drives running HP07 firmware
- Removal of benign EMU event reporting by down-rev EMUs
- Improvement in EMU report of lost communications, allowing for retrys

Support for enhanced optional software

The Enterprise Virtual Array 3000 v3.014 supports the following optional software:

- HP OpenView Storage Operations Manager Software v1.0 for EVA
- HP StorageWorks Continuous Access EVA3000 v1.1
- HP StorageWorks Business Copy EVA 3000 v2.2

Expanded operating system support

VCS v3.014 introduces support for additional operating systems. See "Supported operating systems" on page 9 for details.

Enterprise Virtual Array 3000 Release Notes storage system overview

This document contains the most recent product information about the Enterprise Virtual Array 3000 Release Notes storage system. Much of the information in these notes is not documented elsewhere, so it is recommended that you read this information thoroughly before installing and operating the storage system.

Enterprise Virtual Array 3000 Release Notes documentation

A complete library of Enterprise Virtual Array 3000 documentation is available at the following web site:

http://www.hp.com/go/eva3000

Enterprise Virtual Array system software

Table 1 lists the required HSV100 controller software and the optional software products available on the Enterprise Virtual Array.

Note: HP OpenView Storage Management Appliance software v2.1 is required for managing storage systems running VCS v3.014. If the appliance software must be upgraded, it will be necessary to order the free Storage Management Appliance software v2.1 update CD from the following website:

http://h18000.www1.hp.com/products/sanworks/softwaredrivers/managementappliance/index.html

Table 1: HP StorageWorks Enterprise Virtual Array 3000 required/optional software products

Software product	Version	Required/ optional
HP StorageWorks Virtual Controller Software v3.0 media kit for dual HSV100 controllers	v3.014	Required.
HP OpenView Storage Management Appliance software	v2.1	Required.
HP OpenView Storage Operations Manager, Command View EVA	v3.1	Required. Earlier versions of Command View EVA cannot be used to manage storage systems running VCS 3.014.
HP StorageWorks Business Copy EVA 3000	v2.2	Required for users wanting snapshot capability. Optional for all others.
HP StorageWorks Continuous Access EVA 3000	v1.1	Optional.
Operating System Solution kits	v3.0c	Required.

VCS Media Kit v3.0 for dual HSV100 controllers

The following items are included in the VCS Media Kit v3.0 for Dual HSV100 Controllers:

- *HP StorageWorks Enterprise Virtual Array 3000 Read Me First*
- *HP StorageWorks Enterprise Virtual Array 3000 Release Notes*
- Licensing Materials
- *HP StorageWorks System Software for HSV100 v3.014* CD-ROM
- *HP StorageWorks Enterprise Virtual Array 3000 Documentation* CD-ROM

HP OpenView Storage Operations Manager, Command View EVA is purchased separately but is *required* for VCS v3.014 to function.

Host operating system solution kits must be upgraded to v3.0c for operation with VCS v3.014. The kits are available for download from the following Web site: http://www.hp.com/go/evaplatformkit

Upgrading an existing enterprise Virtual Array 3000 to VCS v3.014

VCS v3.014 is pre-installed on a new Enterprise Virtual Array 3000. To upgrade an existing array, VCS v3.014 can be downloaded from the following web site: http://h18006.www1.hp.com/products/sanworks/softwaredrivers/vcs/index.html

For complete information on upgrading to VCS 3.014, download the *HP StorageWorks Enterprise Virtual Array Updating Product Software Instructions* from the following web site:

http://www.hp.com/go/eva3000

Licensing information

VCS v3.014 requires installation of new licenses as follows:

- Controller software VCS v3.014 does not require a basic license, but a VCS Upgrade User License Agreement is included in the VCS software kit. No action is required to activate the agreement.
- HP OpenView Storage Operations Manager, Command View EVA is licensed separately. Acceptance of the license agreement displayed during installation is the only licensing requirement for Command View EVA.
- The Business Copy EVA license is used to activate the snapshot functionality in the VCS software. Business Copy EVA must be purchased for users to be able to use the snapshot functionality. For licensing information see the *HP StorageWorks Business Copy EVA QuickSpecs* at http://h18006.www1.hp.com/products/storage/software/bizcopyeva/specifications.html.
- Continuous Access EVA requires a license. For licensing information refer to the *HP StorageWorks Continuous Access EVA QuickSpecs* at http://h18006.www1.hp.com/products/storage/software/conaccesseva/specifications.html.

If you have trouble obtaining a License Key or need other licensing support information, refer to the *HP StorageWorks Enterprise Virtual Array License Instructions*, available at http://h18000.www1.hp.com/products/storageworks/enterprise/documentation.html.

For assistance with an incorrect Authorization ID, contact an HP authorized service provider.

For assistance with a lost Authorization ID or missing Authorization ID, contact your HP order channel.

Supported components

This section identifies the various hardware and software components supported by the Enterprise Virtual Array 3000 Release Notes running VCS v3.014.

Supported system configurations

For complete information on supported configurations, refer to the *HP StorageWorks Enterprise Virtual Array 3000 QuickSpecs*, which can be downloaded from the following website:

http://www.hp.com/go/eva3000

Supported operating systems

Table 2 on page 10 lists the supported operating system specifications at the time of release. This information changes frequently as new components and versions are added.

For the most up-to-date information, download the current version of this document from the following web site:

http://www.hp.com/go/eva3000

Note: VCS v3.014 requires v3.0c of the Operating System Solutions kits. The Operating System Solution kits and associated documentation are distributed from the following web site:

http://www.hp.com/storage/evaplatformkit

Table 2: Supported operating system specifications

Operating System	OS Version	HBA (FCA)	Adapter Firmware	Adapter Driver
Windows NT® (Intel®) and Windows® 2000 (32-bit) Windows Server 2003, Enterprise Edition [1] (32 bit)	4.0 SP6a 5.0 SP2, SP3, SP4	LP8000 LP952 (FCA2101)	382a1 BIOS 1.60a5 382a1 BIOS1.61A2 391A1 BIOS163A1	4.81a9 or 4.82a9 4.82A14 4.82A16
		LP9002DC	3.82a1 BIOS 1.61a2 3.91a1 BIOS 1.63a1	4.82a9 4.82a14 4.8216
		QLA2340 BL20P Mezzanine card [2]	1.33 1.34	8.2.0.73 8.2.0.73
		QLA2342 BL20P Mezzanine card [2]	1.33 1.34	8.2.0.73 8.2.0.73
		LP982 [2]	1.01a2	4.82a16
		LP9802 and 9802DC [2]	1.01a2	4.82a16
Windows Server 2003 Enterprise Edition (64-bit) and Datacenter (64-bit)		LP9802	1.01a2	6-5.00a 11
HP-UX	11.0, 11.i, 11.23 (64-bit)	A5158A 1 Gb PCI (11.0 and 11i) A6685A 1 Gb HSC (11.0 and11i) A6795A 2 Gb PCI (All) A6826A 2 Gb (11i) A9782A 2 Gb (11i) A9784A 2 Gb	Native	

Table 2: Supported operating system specifications (Continued)

Operating System	OS Version	HBA (FCA)	Adapter Firmware	Adapter Driver
Tru64 UNIX®	5.1 BL20 PK6 5.1a BL21 PK5 5.1b BL22 PK2	LP8000	3.91a1,	Native
		LP9002 (FCA2354)	3.91a1,	
		LP9802 (FCA2384)	1.00x8	
OpenVMS	7.2-2 VMS722_FIBRE_SCSI-V0400	LP8000 LP9002 (FCA2354)	3.91a1, cd3.81a4	Native
		LP9802 (FCA2384)	1.00x8	
	7.3[1] 7.3-1 VMS73_FIBRE_SCSI-V0500 (for 7.3), VMS7.3-1_UPDATE-V0200 (for 7.3-1) VMS 7.3-2	LP8000 LP9002 (FCA2354)	3.91a1	
		LP9802 (FCA2384)	1.00x8	
Sun Solaris	2.6, 7, 8	JNI FCI-1063 (32-bit PCI)	3.0.3	2.5.9-03
		JNI FC64-1063 (64-bit Sbus)	13.3.7	
		QLA2310 PCI 2 Gb (FCA2257P)	FC 1.18.5/3.1.2	3.26 4.11
		QLA2202 Sbus 1Gb (FCA2257S)	FC 1.18.3/2.2.1	
		QLA2202 cPCI 1Gb[3] (FCA2257C)	FC 1.18.5/3.1.2	
	9 Build 2	QLA2310 PCI 2 Gb (FCA2257P)	FC 1.18.5/3.1.2	3.26 4.11
		QLA2202 Sbus 1Gb (FCA2257S)	FC 1.18.3/2.2.1	
		QLA2202 cPCI 1Gb (FCA2257C)	FC 1.18.5/3.1.2	

Table 2: Supported operating system specifications (Continued)

Operating System	OS Version	HBA (FCA)	Adapter Firmware	Adapter Driver
Linux	Red Hat AS 2.1 (2.4.9-e.3, 2.4.9-e.12, 2.4.9-e3SMP, & 2.4.9-e12SMP) U2 2.4.9-e.25SMP (32-bit) Red Hat AS 3.0 U1 (32 and 64 bit)	QLA 2340 (FCA2214) QLA 2342 (FCA2214DC) BL20P Mezzanine card	BIOS 1.33 1.34	6.04.00, 6.04.01 (native)
	SuSE SLES 7 (2.4.7-4GB, 2.4.18-4GB, 2.4.7-64GB-SMP, 2.4.18--64GB - SMP) 32-bit SuSE SLES8 SP2a/United Linux1.0 (32-bit)			
IBM-AIX	4.3.3, 5.1, 5.2	Cambex 1 Gb PCI	2.01.19, 2.01.38	1.5.22.0 1.5.25.1 (multi-path)
		Cambex 2 Gb PCI	3.02.10	1.5.22.0 1.5.25.1 (multi-path)
Novell NetWare	5.1 SP6, 6.0 SP3, 6.5	QLA 2340 (FCA2210)	1.29 1.34	6.50.s 6.50.y

1. This platform is not supported in Enterprise storage system configurations with Continuous Access EVA.
2. Not supported on NT
3. QLA cPCI 1 Gb adapter (FCA2257C) is not supported by VCS v3.014 on Solaris 2.6 and 7.

Clustering support

Table 3 shows the clustering applications and cluster node sizes supported by VCS v3.014.

Table 3: Clustering support

Operating System	Cluster Service	Number of Cluster Nodes SP = single path MP = multipath
Windows NT (SP6); Windows 2000 SP2, 3, 4 (32-bit); Windows Server 2003, Enterprise Edition (32-bit)	MSCS, Oracle 9iRAC	SP - no support MP - 2-node (NT, W2K) MP - 8-node (WS2003)
Windows Server 2003 Enterprise Edition(64-bit); Datacenter (64-bit)	MSCS, Oracle 9iRAC	SP - no support
HP-UX 11.0, 11i, 11.23 (64-bit)	ServiceGuard 11.14, ServiceGuard 11.15	SP - no support MP - 4-node
Tru64 UNIX 5.1 BL20 (Patch Kit 6) 5.1a BL21 (Patch Kit 5) 5.1b BL22 (Patch Kit 2)	TruCluster	Max = 8 SP - no support MP - 8-node
OpenVMS7.2-2, 7.3, 7.3-1, 7.3-2	VMS Cluster	Max = 96 SP - no support MP - test with 8-node
Sun Solaris 2.6, 7, 8	SunCluster v2.2, VERITAS Foundation Suite v2.0, VERITAS Foundation Suite v3.5 (SunCluster v2.2 and VFS v3.5 not supported for v2.6)	Max = 32-node (VERITAS) SP - no support MP - 4-node
Sun Solaris 9 Build2	VERITAS Foundation Suite v2.0, VERITAS Foundation Suite 3.5 SunCluster v3.1	Max = 32-node (VERITAS) SP - no support MP - 4-node

Table 3: Clustering support (Continued)

Operating System	Cluster Service	Number of Cluster Nodes SP = single path MP = multipath
Linux Red Hat AS2.1 (2.4.9-e3, 2.4.9-e12, 2.4.9-e3smp, 2.4.9-e12smp) +U2 2.4.9-e25smp (32-b9it) Linux Red Hat AS 3.0 U1 (32 and 64 bit) Suse SLES7 (2.4.7-4GB, 2.4.18-4GB, 2.4.7-64GB-SMP, 2.4.18-64GB-SMP) (32-bit) Suse SLES8 SP2a/United Linux1.0 (32-bit)	Lifekeeper v4.2 Lifekeeper v4.3	SP - 16-node MP - 2-node MP - 8-node
	ServiceGuard 11.14.02	SP - test with 4-node - support 16-node MP - 4-node
	ServiceGuard 11.15.01	SP - test with 4-node - support 16-node MP - 8-node
	Oracle 9iRAC (U2 only)	N/A
Linux Redhat AS2.1 U2 (64-bit) Suse SLES8/United Linux 1.0 (64-bit)	ServiceGuard 11.15.01	SP - 16-node MP - 4- or 8-node
IBM AIX	HACMP 4.4.1, HACMP 4.5	SP - no support MP- 2-node
Novell NetWare 5.1 SP6 6.0 SP3 6.5	NetWare Cluster Server v1.01 (NW v5.1)[1] NetWare Cluster Server v1.06 (NW v6.0) NetWare Cluster Server v1.7 (NW v6.5)	SP - no support MP - 6-node

1. Novell NetWare clusters are limited to two servers if Secure Path is installed.

Multipathing support

Multipathing refers to the use of multiple host bus adapters (HBAs) in a server for high availability. OpenVMS and Tru64 UNIX require no additional software for high availability multipathing capability; multipathing is integrated into recent releases of these operating systems.

HP StorageWorks Secure Path provides multipathing capability for hosts running Windows, Sun Solaris, HP-UX, IBM-AIX, NetWare, and Linux. See Table 4 for the specific Secure Path versions. Secure Path documentation is located at the following URL:
http://h18006.www1.hp.com/products/sanworks/secure-path/documentation.html.

Table 4: Secure Path versions for supported operating systems

Operating system[1]	In configurations with	Secure Path Version for use in configurations without Continuous Access EVA	Secure Path Version for use in configurations with Continuous Access EVA
Windows NT (Intel), Windows 2000 (32-bit), and Windows Server 2003 Enterprise Edition (32-bit)	LP8000, LP952 (FC2101), or LP9002DC (FCA2404)	4.0b or 4.0c	4.0b or 4.0c
	QLA2340 (FCA2214) or QLA2342 (FCA2214dc)	4.0b or 4.0c	4.0b or 4.0c
	LP982 (not supported on NT)	4.0b or 4.0c	4.0b or 4.0c
	LP9802 and LP9802DC	4.0b or 4.0c	4.0b or 4.0c
Windows Server 2003 Enterprise Edition (64-bit) and Datacenter (64-bit)	LP9802	4.0c	4.0c
HP-UX	Any supported adapter/ firmware/driver as shown in Table 2	3.0c, 3.0d (3.0c required for 11.23 but does not support 11.0)	3.0c, 3.0d (3.0c required for 11.23 but does not support 11.0)
Sun Solaris	Version 2.6, 7, or 8	3.0a SP1, 3.0b, 3.0b SP1, 3.0c	3.0a SP1, 3.0b, 3.0b SP1, 3.0c
	Version 9	3.0b, 3.0b SP1, 3.0c	3.0b, 3.0b SP1, 3.0c
Linux	Any supported adapter/ firmware/driver as shown in Table 2	3.0, 3.0a	3.0, 3.0a
IBM-AIX	Adapter firmware 2.01.38 (1Gb)	2.0b, 2.0c, 2.0d SP2	2.0c, 2.0d SP2
	Adapter firmware 3.02.10 (2Gb)	2.0b, 2.0c, 2.0d SP2	2.0d SP2
Novell NetWare[2]	Any supported adapter/ firmware/driver as shown in Table 2	3.0c, 3.0c SP2	3.0c, 3.0c SP2

1. See Table 2 for supported versions.

2. Novell NetWare clusters are limited to two servers if Secure Path is installed.

Singlepathing support configurations

The following platforms are supported configurations using servers with a single HBA:

- HP-UX
- Windows 2000 and Windows NT
- Sun Solaris
- OpenVMS
- Tru64 UNIX
- Linux
- NetWare

Note: OpenVMS and Tru64 UNIX have built in multipathing features that are not removable, but singlepathing is supported.

For more information about singlepathing, see the white paper titled *Single Path Implementation on the HP Enterprise Virtual Array Storage System* at http://h18006.www1.hp.com/storage/arraywhitepapers.html.

Note: Singlepathing should not be used in mission-critical environments.

Singlepathing is not supported in Continuous Access EVA environments; hosts in a Continuous Access EVA configuration must contain multiple host bus adapters.

Supported disks

Table 5 lists the supported Fibre Channel disks.

Table 5: Supported disks

Fibre Channel disk	HP model shown by Command View EVA	Minimum firmware revision
10K RPM 36 GB dual ported	BD03654499	3BE3
10K RPM 36 GB dual ported	BD03655B28	HP00, HP03
10K RPM 72 GB dual ported	BD07254498	3BE3
10K RPM 72 GB dual ported	BD07255B29	HP00, HP03
10K RPM 146 GB dual ported	BD14655B2A	HP00, HP03
15K RPM 36 GB dual ported	BF03654564	3BE6
15K RPM 36 GB dual ported	BF03655B2B	HP00, HP03
15K RPM 72 GB dual ported	BF07255B2C	HP00, HP03

Note: Mixing disk types within a disk group is not recommended. Mixing disk types can result in an inefficient use of capacity when using the disk failure protection level option. This option always uses the capacity of the largest disk in the disk group when reserving space for failure protection.

Supported servers

The servers supported are listed in Table 6 and Table 7.

Table 6: Supported servers by operating system

Operating system	Supported servers
Windows	■ HP ProLiant servers that are compatible with the supported adapters listed in Table 2. ■ Other industry-standard x86 servers that are compatible with the supported adapters listed in Table 2.
HP-UX	See Table 7.
Sun Solaris	All Sun servers using 4u architecture.
Linux	■ HP ProLiant servers that are compatible with the supported adapters listed in Table 2. ■ Other industry-standard x86 servers that are compatible with the supported adapters listed in Table 2.
IBM-AIX	All IBM RS/6000 PCI-based servers, 43P, B80.
Novell NetWare	■ HP ProLiant servers that are compatible with the supported adapters listed in Table 2. ■ Other industry-standard x86 servers that are compatible with the supported adapters listed in Table 2.
Tru64 UNIX and OpenVMS	■ AS800 ■ AS1200 ■ AS4000 ■ AS4100 ■ AS8200 ■ AS8400 ■ DS10 & DS15 ■ DS20 ■ DS20E ■ DS20L ■ DS25 ■ ES40 ■ ES45 ■ ES47 ■ ES80 ■ GS60 ■ GS80 ■ GS140 ■ GS160 ■ GS320 ■ GS1280

Table 7: Supported HP-UX servers

Server class	Models
A-class	4xx, 5xx, rp2300, rp24xx
B-class	B2000, B2600
C-class	C3000, C3650, C3700
J-class	J5600, J6000, J6700
K-class (64-bit only)	Kx60, Kx70, Kx80
L-class	1000, 2000, rp5430, rp5450, rp5470
N-class	4000, rp7400, rp7410
V-class	V2200, V2250, V2500, V2600
—	rp8400, rx16000, rp8420, rp7420, rp4440, rp3440
—	Superdome (16-, 32-, and 64-way)
IA64	rx2000, rx2600, rx5670 servers; and zx2000 and zx6000 workstations with McKinley processors

Recommended browsers and Java™ Runtime Environments

Table 8 lists the recommended browsers for running Storage Management Appliance software v2.1 and Command View EVA v3.1.

Table 8: Recommended Browsers and JREs

Operating system	Internet browser	Java Runtime Environment (JRE)
HP-UX 11i, 11.23,	Netscape Navigator 7.0	1.4.1_02
Red Hat Linux AS 2.1 (32-bit)	Netscape Navigator 7.02	1.4.1_03
Sun Solaris™ 2.6, 7, 8, 9	Netscape Navigator 7.0	1.4.1_03
Windows® 2000 SP3	Internet Explorer 6.0 SP1	1.4.1_03
Windows NT® v4.0 SP6a	Internet Explorer 6.0 SP1	1.4.1_03
Windows Server 2003 (IA32 and IA64)	Internet Explorer 6.0 v6.00.3790.000	1.4.1_03

Operating constraints

This section identifies operating constraints specific to the Enterprise Virtual Array hardware and Enterprise Virtual Array VCS software. Operating constraints on related software applications are included in the following documents:

- Operating constraints specific to the HP OpenView Storage Management Appliance software v2.1 can be found in the *HP OpenView Storage Management Appliance Software v2.1 Release Notes*.
- Operating constraints specific to HP OpenView Storage Operations Manager, Command View EVA can be found in the *HP StorageWorks Command View EVA v3.1 Release Notes*.
- Operating constraints specific to HP StorageWorks Continuous Access EVA can be found in the *HP StorageWorks Continuous Access EVA v1.1 Release Notes*.

In addition, any operating constraints pertaining to the host operating system can be found in the individual operating system release notes.

HP-UX 11.23 and VCS 3.014

HP-UX 11.23 servers require VCS 3.014 or later to communicate with the Enterprise Virtual Array 3000 Release Notes. Earlier versions of VCS are not supported on HP-UX 11.23.

Sun Servers with Qlogic HBAs and Brocade FC Switches

If you are operating Sun servers in a SAN environment that includes Qlogic HBAs and Brocade FC switches, ensure that the switch firmware has been upgraded to version 3.1 or 4.1 (depending on the switch model). The EVA storage system does not support Qlogic HBAs running 1.18 firmware in the same environment with Brocade switch firmware versions older than 3.1 and 4.1. Failure to observe this restriction may result in continuously rebooting switches in certain situations.

Sun Solaris v9 and Business Copy

HP StorageWorks Business Copy EVA 3000 is not supported on Sun Solaris v9.

Support for Proactive Remote Services

Proactive Remote Services requires use of Web-Based Enterprise Services System Event Analyzer (WEBES-SEA) V4.2 with VCS v3.014. WEBES-SEA v4.2 is expected to be available shortly after release of VCS v3.014. Proactive Remote Services (PRS) will not support trap-based event reporting on VCS v3.014 after release of WEBES-SEA v4.2.

Customers with current PRS installations who are upgrading their Enterprise Virtual Arrays to VCS v3.014 may continue to use their current trap-based PRS configuration until release of WEBES-SEA V4.2. When WEBES-SEA V4.2 becomes available, these customers should upgrade their PRS installations to use WEBES-SEA V4.2. Contact your HP authorized service representative for information on the availability of WEBES-SEA V4.2. Note that trap-based reporting does not include events specific to Continuous Access EVA.

Customers who are adding new Enterprise Virtual Arrays for the first time to existing or new PRS installations may obtain an interim solution prior to WEBES-SEA V4.2 availability by contacting their HP authorized service representative.

For customers in Europe, the Middle East, and Africa, proactive event notification will normally be provided by the Event View EVA diagnostic and monitoring utility connected to the European Instant Support Enterprise Edition (ISEE) monitoring center. Contact your HP authorized service representative for more information.

Avoiding problem situations

This section details methods to avoid problem situations specific to the Enterprise Virtual Array hardware and Enterprise Virtual Array VCS software.

- Information on avoiding problem situations specific to the HP OpenView Storage Management Appliance can be found in the *HP OpenView Storage Management Appliance Software v2.1 Release Notes*.
- Information on avoiding problem situations specific to HP OpenView Storage Operations Manager, Command View EVA can be found in the *HP StorageWorks Command View EVA v3.1 Release Notes*.
- Information on avoiding problem situations specific to operating systems can be found in the individual operating system release notes.

Consistent presentation of disks while making a snapshot

HP strongly recommends that the host presentation status of *all* of the virtual disks associated with a snapshot be consistent (that is, all virtual disks associated with the snapshot be presented or be not presented).

Avoiding slow creation of multiple related snapshots

Sometimes the creation of a second snapshot of the same virtual disk can take a long time. When this condition occurs, the delay in responding to the snapshot creation command may have the appearance of a hung system. This condition may occur when multiple snapshots of the same virtual disk are active simultaneously. This condition typically does *not* occur when only one snapshot operation on a particular virtual disk is active.

If the slow creation of multiple snapshots of the same virtual disk is causing you a problem, a workaround is available. Refer to *How to Optimize Creation of Multiple Related Snapshots* at http://h18006.www1.hp.com/storage/arraywhitepapers.html.

Ensure correct host operating system kits are installed

There are new host operating system kits for all operating systems supported by VCS v3.014. Host operating systems must be upgraded to the latest versions to work with VCS v3.014. The latest platform kits are available for download at the following Web site: http://www.hp.com/go/evaplatformkit.

Perform VCS v3.014 online upgrade during off-peak hours

When upgrading the controller software to VCS v3.014, be aware that the upgrade process requires some time and can cause system time outs to occur. When performing an online upgrade, HP recommends it be done during off-peak hours with minimal applications running.

Refer to *hp StorageWorks Enterprise Virtual Array Updating Product Software Instructions* for complete upgrading instructions.

Business Copy EVA 3000 upgrade

Users having Business Copy EVA 3000 v2.1 must upgrade to Business Copy EVA v2.2 to interface properly with VCS v3.014. Changes to the graphical user interfaces in each of the applications necessitate the upgrade requirement.

Business Copy EVA 3000 v2.2 can be downloaded from the following website: http://h18006.www1.hp.com/products/storage/software/softwaredrivers/bizcopyeva/index.html

Business Copy EVA licensing

Business Copy Basic Mode refers to the snapshot and snapclone features of individual StorageWorks arrays. With Basic Mode, you create and delete snapshots and snapclones using the Command View EVA interface, or an EVA host platform interface. You must acquire and install a Business Copy replication license key for each array that is to perform snapshot or snapclone operations.

You can add Enhanced Mode capabilities to your SAN by installing Business Copy server and host agent software. No additional licensing is required. Using the Enhanced Mode GUI, you can create and manage jobs that automate snapshot and snapclone operations. Enhanced Mode jobs can also interact with hosts, for example, to suspend/resume application I/O, mount/unmount volumes, and launch backup applications. Using the Enhanced Mode command line interface you can interact with jobs via host scripts.

Documentation updates

The following information supplements the contents of the indicated documentation. This information will be included in the next edition of the documentation.

Changing virtual disk failover/failback setting

The following information supplements the Failover/Failback information included in Chapter 1 of the *HP StorageWorks Enterprise Virtual Array 3000 User Guide*.

Changing the failover/failback setting of a virtual disk may impact which controller presents the disk. The following table identifies the presentation behavior that results when the failover/failback setting for a virtual disk is changed.

Note: If the new setting causes the presentation of the virtual disk to move to a new controller, any snapshots or snapclones associated with the virtual disk will also be moved.

Table 9: Impact on virtual disk presentation when changing failover/failback setting

New setting	Impact on virtual disk presentation
No Preference	None. The disk maintains its original presentation
Path A Failover	If the disk is currently presented on controller B, it is moved to controller A. If the disk is on controller A, it remains there.
Path B Failover	If the disk is currently presented on controller A, it is moved to controller B. If the disk is on controller B, it remains there.
Path A Failover/Failback	If the disk is currently presented on controller B, it is moved to controller A. If the disk is on controller A, it remains there.
Path B Failover/Failback	If the disk is currently presented on controller A, it is moved to controller B. If the disk is on controller B, it remains there.

Correction to rack-to-rack copper cable length

The *HP StorageWorks Enterprise Virtual Array Hardware Configuration Guide* incorrectly identifies the length of the rack-to-rack copper cable as 5 meters. The correct length of the cable is 2 meters.